

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-009211**Date Inspected:** 22-Sep-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG & Tower Fabrication**Summary of Items Observed:**

CWI Inspectors: Mr. Li Yang, Mr. Zhu Tian Shu

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

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This QA Inspector observed ZPMC welder Ms. Gao Xiue, stencil 206358 has used welding procedure specification WPS-B-T-2132-3 to make floor beam flux cored weld FB3082-001-026. This QA Inspector observed that ZPMC Quality Control Inspector Mr. Yang Qing Feng had recorded Ms. Gao Xiue to have a welding current of 299 amps, 29.5 volts and a welding speed of 410 mm per minute. This QA Inspector measured Ms. Gao Xiue to have a welding current of 290 amps and 29.5 volts. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

This QA Inspector observed ZPMC welder Mr. Lv Feng Yin, stencil 215676 is using welding procedure specification WPS-B-T-2132-3 to make floor beam flux cored weld FB3012-003-027. This QA Inspector observed that ZPMC Quality Control Inspector Mr. Yang Qing Feng had recorded Mr. Lv Feng Yin to have a welding current of 296 amps, 29.5 volts and a welding speed of 420 mm per minute. This QA Inspector measured Mr. Lv Feng Yin to have a welding current of 285 amps and 30.0 volts. Items observed by this QA Inspector

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appear to be progressing in compliance with project specifications.

This QA Inspector observed ZPMC welder Mr. Li Guo Ping, stencil 045251 is using shielded metal arc process WPS-B-T-2112 to tack OBG floor beam fillet weld FB3100-001-001. This QA Inspector observed a welding current of approximately 160 amps, the base material is clean where the tack welds were being made and Mr. Li Guo Ping is certified to make this weld. This QA Inspector observed the shielded metal arc welding electrodes are being stored in an electrically heated electrode storage container which is warm to the touch and it appears to be connected to the welding power supply cable. Items observed on this date appeared to generally comply with applicable contract documents.

OBG Bay 5

This QA Inspector observed ZPMC welder Mr. Li Yuan Zheng, stencil 217185 is using flux cored welding process WPS-B-T-2231-B-U2-F to make traveler rail flux cored groove weld 10TR-022-3. This QA Inspector measured a welding current of approximately 290 amps and 34.0 volts. ZPMC QC Inspector Mr. Zhong Dong Baio observed that this QA Inspector had measured Mr. Zheng to have 34 volts and Mr. Baio adjusted the welding voltage to 30 volts. This QA Inspector asked ZPMC CWI Mr. Li Yang if Mr. Baio had recently measured the welding parameters and Mr. Yang said the welder had just started welding. This QA Inspector observed ZPMC QC Inspector Mr. Zhong Dong Baio did not have a welding amp probe or a flashlight. This QA Inspector visually inspected several of the traveler rail groove complete joint penetration welds that had been backgouged and ground, and this QA Inspector observed several areas where the weld groove had not been ground to a bright metal condition and that there are localized areas where the carbon air arc gouge oxidized surface is visible. This QA Inspector used a flashlight to show ZPMC QC Inspector Mr. Zhong Dong Baio and ZPMC CWI Mr. Li Yang these oxidized weld groove surfaces and Mr. Baio said he will have the areas ground. This QA Inspector asked Mr. Yang if Mr. Baio can perform adequate visual inspections of these groove welds without a flashlight. Mr. Yang said he will ensure Mr. Baio uses a flashlight to inspect the other groove welds prior to welding. This QA Inspector observed that Mr. Li Yuan Zheng is certified to make this weld. Items observed on this date do not fully comply with applicable contract documents.



Summary of Conversations:

See above.

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Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer
